Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1. (Currently Amended) 1. An ethylene-vinyl alcohol based copolymer, comprising:

ethylene units (III), vinyl alcohol units (IV), and vinyl ester units (V), characterized in that wherein the proportion of the ethylene units (III) with respect to the total of the units (III + IV + V) is ranges from 20 to 60 mole %, and the proportion of the total (I + II) of carboxylic acids units (I) and lactone ring units (II) in copolymer terminals with respect to the total (III + IV + V) of the units is 0.12 mole % or less, the respective units (I) through (V) represented by the following formulae:

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where X is a hydrogen atom, a hydroxyl group, or an esterified hydroxyl group, Y is a hydrogen atom, an alkali metal, or an alkaline earth metal, and R is a linear or branched alkyl group.

Claim 2-7. Canceled

Claim 8. (New) The ethylene-vinyl alcohol based copolymer according to claim 1, wherein the content of ethylene units ranges from 22 to 55 mole %.

Claim 9. (New) The ethylene-vinyl alcohol based copolymer according to claim 1, wherein the content of ethylene units ranges from 24 to 60 mole %.

Claim 10. (New) The ethylene-vinyl alcohol based copolymer according to claim 1, wherein the intrinsic viscosity of the ethylene-vinyl alcohol based copolymer ranges from 0.05 to 1.5 dL/g.

Claim 11. (New). An ethylene-vinyl alcohol based copolymer, comprising:

ethylene units (III), vinyl alcohol units (IV), and vinyl ester units (V), wherein the proportion of the ethylene units (III) with respect to the total of the units (III + IV + V) ranges from 20 to 60 mole %, the proportion of the total (I + II) of carboxylic acids units (I) and lactone ring units (II) in copolymer terminals with respect to the total (III + IV + V) of the units is 0.12 mole % or less, and wherein the proportion of the vinyl ester units (V) with respect to the total (IV + V) of the vinyl alcohol units (IV) and the vinyl ester units (V) is 0.20 mole % or less the respective units (I) through (V) represented by the following formulae:

$$---\mathsf{CH_2}-\mathsf{CH_2}---\cdots \quad 1\!\!1\!\!1)$$

where X is a hydrogen atom, a hydroxyl group, or an esterified hydroxyl group, Y is a hydrogen atom, an alkali metal, or an alkaline earth metal, and R is a linear or branched alkyl group.

Claim 12. (New). An ethylene-vinyl alcohol based copolymer, comprising:

ethylene units (III), vinyl alcohol units (IV), and vinyl ester units (V), wherein the proportion of the ethylene units (III) with respect to the total of the units (III + IV + V) ranges from 20 to 60 mole %, and the proportion of the total (I + II) of carboxylic acids units (I) and lactone ring units (II) in copolymer terminals with respect to the total (III + IV + V) of the units is 0.12 mole % or less, the respective units (I) through (V) represented by the following

formulae:

where X is a hydrogen atom, a hydroxyl group, or an esterified hydroxyl group, Y is a hydrogen atom, an alkali metal, or an alkaline earth metal, and R is a linear or branched alkyl group, and wherein the ethylene-vinyl alcohol based copolymer conforms to the expression $G < 1.53 - 0.0239 \times Eu$, where G is a numerical value representing the content of 1,2-glycol units, expressed as mole %, and Eu is a numerical value representing the proportion of the ethylene units (III) with respect to the total (III + IV + V) of the ethylene units (III), the vinyl alcohol units (IV), and the vinyl ester units (V), expressed as mole %.

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Claim 13. (New) An ethylene-vinyl alcohol based copolymer resin composition, comprising:

an ethylene-vinyl alcohol based copolymer according to claim 1, and 10 to 1000 ppm of an alkali metal salt in terms of the alkali metal.

Claim 14. (New) A method for producing an ethylene-vinyl alcohol based copolymer, comprising the steps of:

saponifying an ethylene-vinyl ester based copolymer comprising ethylene units (III), vinyl alcohol units (IV), and vinyl ester units (V), wherein the proportion of the ethylene units (III) with respect to the total of the units (III + IV + V) ranges from 20 to 60 mole %, and the proportion of the total (I + II) of carboxylic acids units (I) and lactone ring units (II) in copolymer terminals with respect to the total (III + IV + V) of the units is 0.12 mole % or less, the respective units (I) through (V) represented by the following formulae:

$$---CH_2-CH_2---$$
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where X is a hydrogen atom, a hydroxyl group, or an esterified hydroxyl group, Y is a hydrogen atom, an alkali metal, or an alkaline earth metal, and R is a linear or branched alkyl group; and

reducing at least one substance which is the ethylene-vinyl ester based copolymer component or the ethylene-vinyl alcohol based copolymer component by contacting the at least one substance with a reducing agent.

Claim 15. (New) A method for producing an ethylene-vinyl alcohol based copolymer, comprising:

copolymerizing an ethylene and a vinyl ester, wherein the proportion of ethylene units (III) in the copolymer with respect to the total of the units (III + IV + V) ranges from

20 to 60 mole %, and the proportion of the total (I + II) of carboxylic acids units (I) and lactone ring units (II) in copolymer terminals with respect to the total (III + IV + V) of the units is 0.12 mole % or less, the respective units (I) through (V) represented by the following formulae:

$$---$$
CH₂-CH₂-- ··· III)

where X is a hydrogen atom, a hydroxyl group, or an esterified hydroxyl group, Y is a hydrogen atom, an alkali metal, or an alkaline earth metal, and R is a linear or branched alkyl group, at a polymerization temperature of -20° C to 90° C and at a polymerization rate is 3 % to 48 % with respect to the vinyl ester; and

saponifying the ethylene-vinyl ester based copolymer to obtain an ethylene-vinyl alcohol based copolymer.

Claim 16. (New) The method for producing an ethylene-vinyl alcohol based copolymer according to claim 15, wherein polymerization is conducted for a period of time ranging from 1 hour to 7 hours.